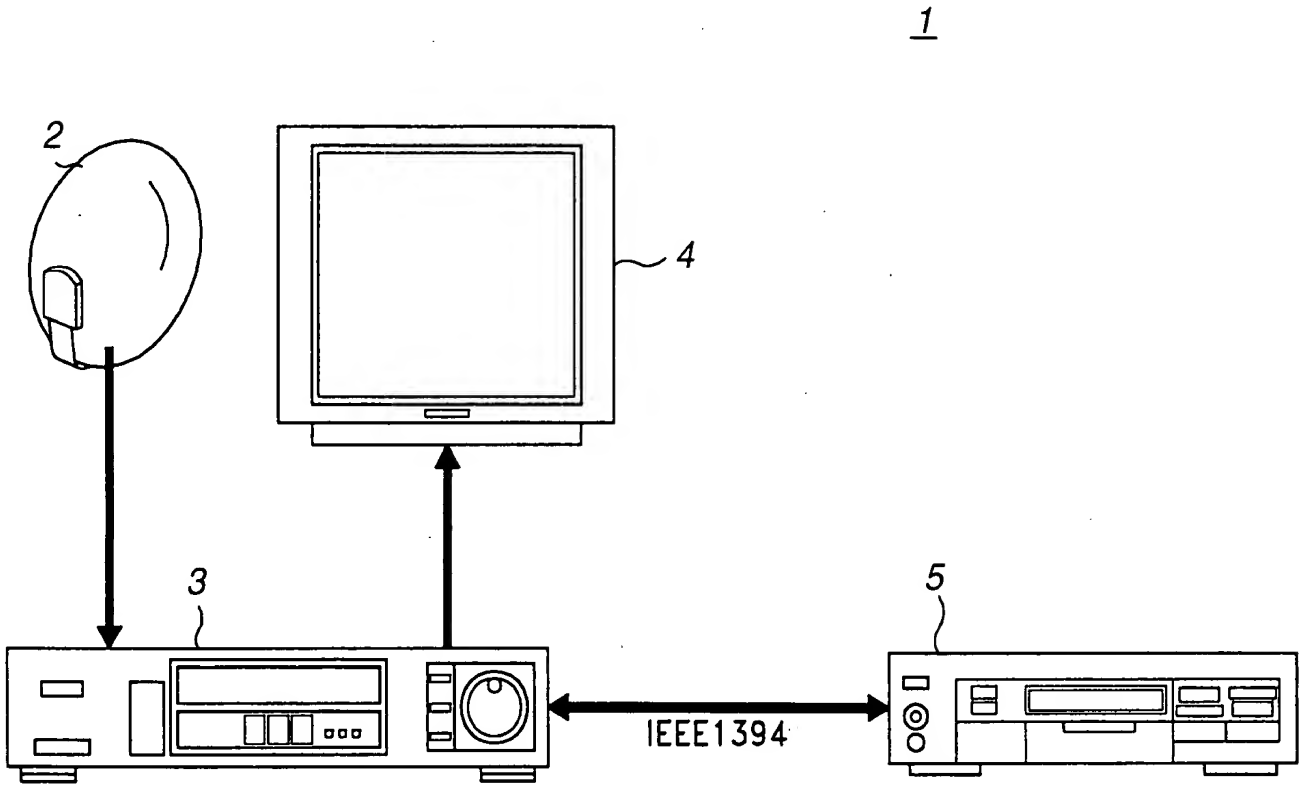

FIG.1

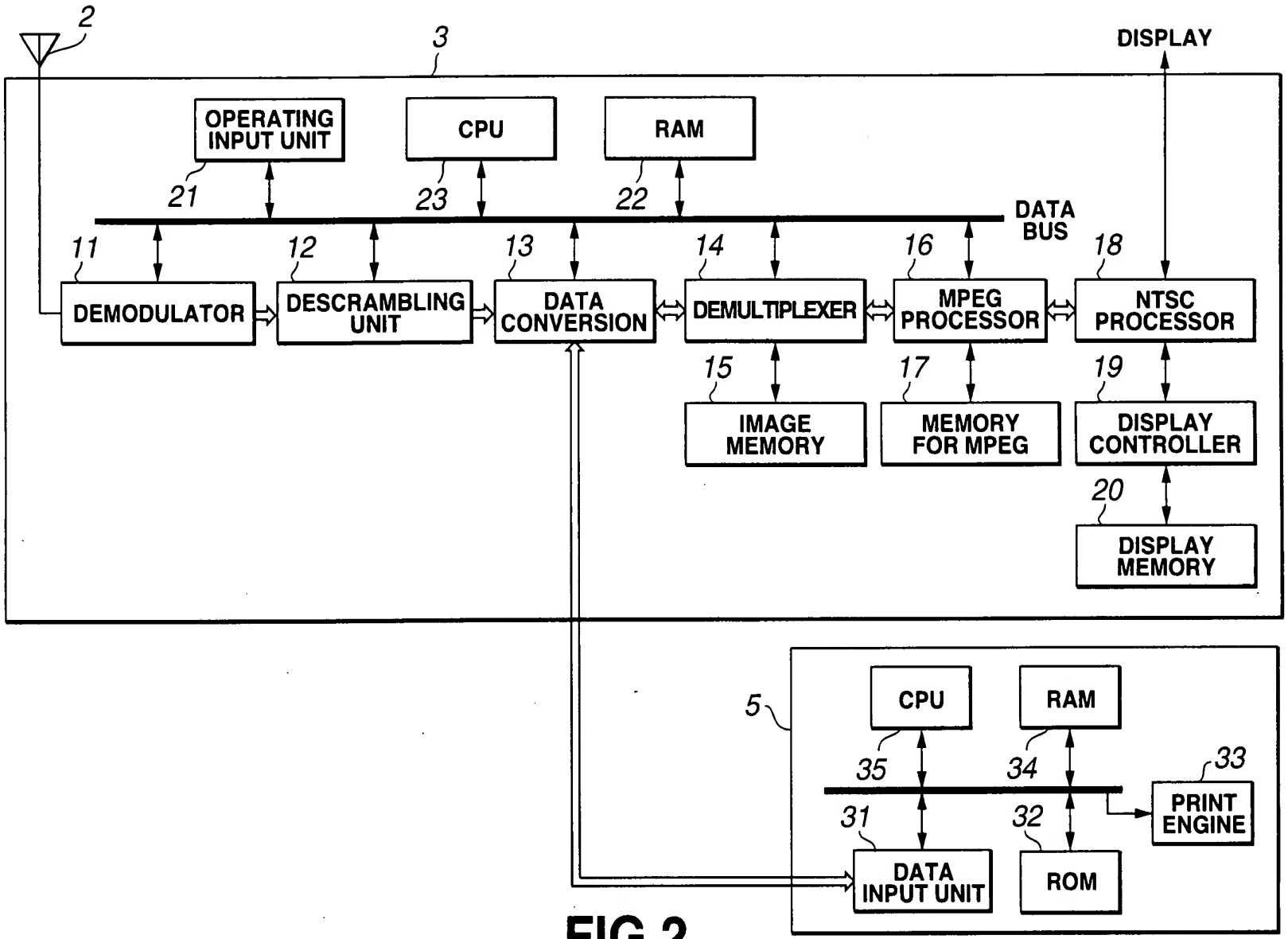

FIG.2

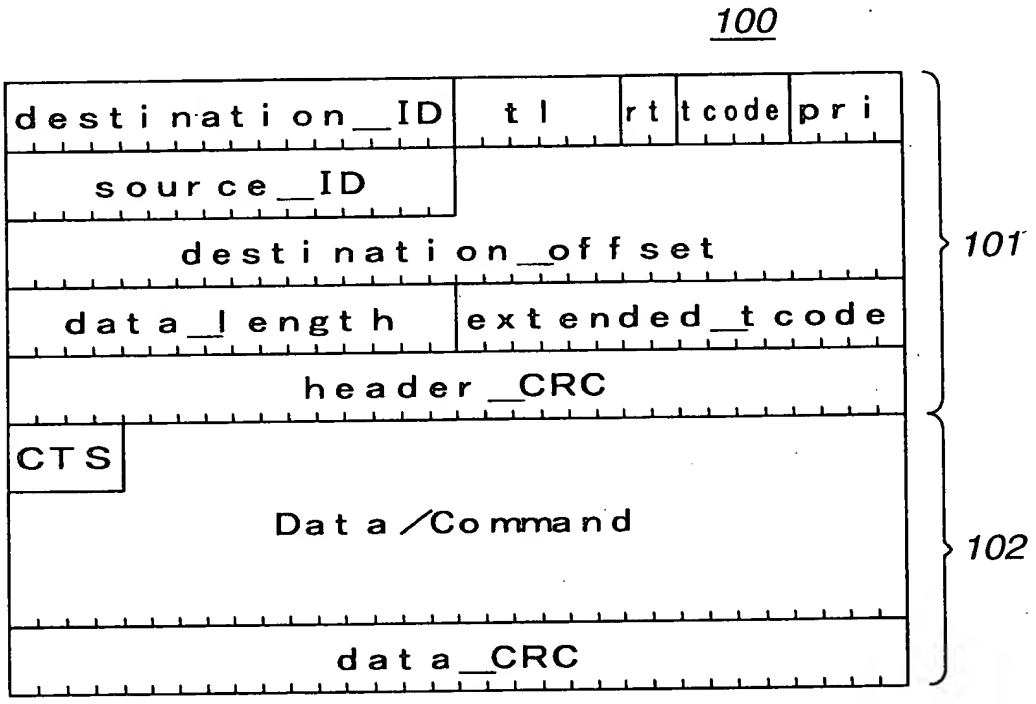

FIG.3

CTS	ctype	subunit_type	subunit_ID	opecode	operand[0]
operand[1]		operand[2]		operand[3]	operand[4]
....					
operand[n]					

FIG.4

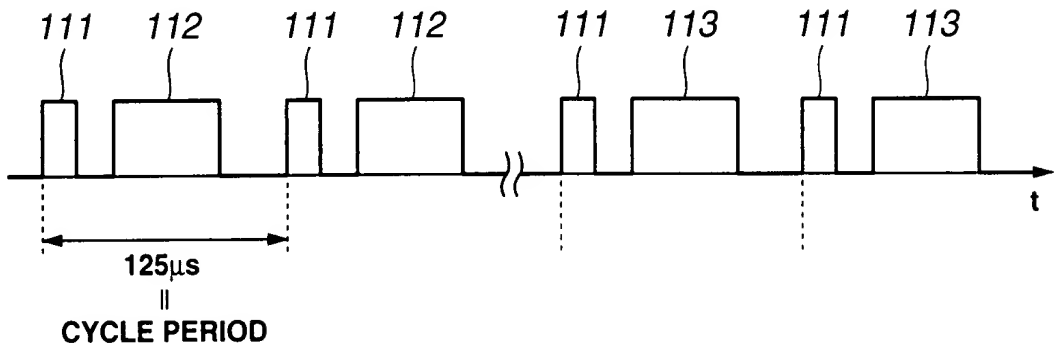

FIG.5

	pixel_x	pixel_y	interlaced/ progressive	pixel format	screen aspect ratio	pixel aspect ratio	based standard	image size
1080_422_16x9	1920	1080	interlaced/ progressive	YCbCr 4:2:2	16:9	1:1	ITU-R BT. 709-2	3.96MB
1080_420_16x9	1920	1080	interlaced/ progressive	YCbCr 4:2:0	16:9	1:1	ITU-R BT. 709-2	2.97MB
720_422_16x9	1280	720	progressive	YCbCr 4:2:2	16:9	1:1	ANSI/SMP TE 296 M-1997	1.76MB
720_420_16x9	1280	720	progressive	YCbCr 4:2:0	16:9	1:1	ANSI/SMP TE 296 M-1997	1.32MB
576_422_4x3	720	576	interlaced/ progressive	YCbCr 4:2:2	4:3	1.07:1	ITU-R BT.1203	810KB
576_420_4x3	720	576	interlaced/ progressive	YCbCr 4:2:0	4:3	1.07:1	ITU-R BT.1203	608KB
480_422_16x9	720	480	interlaced/ progressive	YCbCr 4:2:2	16:9	1.19:1	ITU-R BT. 709-2	675KB
480_420_16x9	720	480	interlaced/ progressive	YCbCr 4:2:0	16:9	1.19:1	ITU-R BT. 709-2	506KB
480_422_4x3	720	480	interlaced/ progressive	YCbCr 4:2:2	4:3	0.89:1	ITU-R BT.601-4	675KB
480_420_4x3	720	480	interlaced/ progressive	YCbCr 4:2:0	4:3	0.89:1	ITU-R BT.601-4	506KB

FIG.6

	msb							lsb
opcode	CAPTURE(42_{16})							
operand[0]	subfunction							
operand[1]	source_subunit_type						source_subunit_ID	
operand[2]	source_plug							
operand[3]	status							
operand[4]	dest_plug							
operand[5]	print_job_ID							
⋮								
operand[16]								
operand[17]	data_size							
operand[18]								
operand[19]								
operand[20]								
operand[21]	image_size_x							
operand[22]								
operand[23]	image_size_y							
operand[24]								
operand[25]	image_format_specifier							
operand[26]								
operand[27]	reserved							
operand[28]								
operand[29]								
operand[30]	next_pic							
operand[31]	next_page							
operand[32]								

FIG.7

value	Type	Meaning
20_{16}	1080i_422chunky_16X9	
21_{16}	1080p_422chunky_16X9	
22_{16}	720p_422chunky_16X9	
23_{16}	480I_422chunky_16X9	
24_{16}	480p_422chunky_16X9	
25_{16}	480I_422chunky_4X3	
26_{16}	480p_422chunky_4X3	
28_{16}	1080i_422liner_16X9	
29_{16}	1080p_422liner_16X9	
$2A_{16}$	720p_422liner_16X9	
$2B_{16}$	480I_422liner_16X9	
$2C_{16}$	480p_422liner_16X9	
$2D_{16}$	480I_422liner_4X3	
$2E_{16}$	480p_422liner_4X3	
30_{16}	1080i_420planer_16X9	
31_{16}	1080p_420planer_16X9	
32_{16}	720p_420planer_16X9	
33_{16}	480I_420planer_16X9	
34_{16}	480p_420planer_16X9	
35_{16}	480I_420planer_4X3	
36_{16}	480p_420planer_4X3	
38_{16}	1080i_420liner_16X9	
39_{16}	1080p_420liner_16X9	
$3A_{16}$	720p_420liner_16X9	
$3B_{16}$	480I_420liner_16X9	
$3C_{16}$	480p_420liner_16X9	
$3D_{16}$	480I_420liner_4X3	
$3E_{16}$	480p_420liner_4X3	
60_{16}	Text(ASCII)	MD-clip ASCII
61_{16}	Text(ISO8859-1)	MD-clip modified ISO8859-1
62_{16}	Text(Music Shifted JIS)	MD-clip Music Shifted JIS

FIG.8

Valuue(MSB)	Valuue(LSB)	Type	Meaning
00_{16}			sRGB raw
	00_{16}	sRGB raw	
	01_{16}	sRGB raw,quadlet	
01_{16}			YCC raw
	$0X_{16}$	YCC4:2:2 raw/chunky	
	$1X_{16}$	YCC4:2:2 raw/liner	
	$8X_{16}$	YCC4:2:0 raw/chunky	
	$9X_{16}$	YCC4:2:0 raw/liner	
	$X0_{16}$	Pixel ratio 1.00X1.00/ITU-R BT.709-2/interlace	
	$X1_{16}$	Pixel ratio 1.19X1.00/ITU-R BT.709-2/interlace	
	$X2_{16}$	Pixel ratio 0.89X1.00/ITU-R BT.709-2/interlace	
	$X3_{16}$	Pixel ratio 0.89X1.00/ITU-R BT.601-4/interlace	
	$X4_{16}$	Pixel ratio 1.07X1.00/ITU-R BT.1203/interlace	
	$X8_{16}$	Pixel ratio 1.00X1.00/ITU-R BT.709-2/progressive	
	$X9_{16}$	Pixel ratio 1.19X1.00/ITU-R BT.709-2/progressive	
	XA_{16}	Pixel ratio 0.89X1.00/ITU-R BT.709-2/progressive	
	XB_{16}	Pixel ratio 0.89X1.00/ITU-R BT.601-4/progressive	
	XC_{16}	Pixel ratio 1.07X1.00/ITU-R BT.1203/progressive	
10_{16}			DCF Object
	00_{16}	Exif2.1	
	01_{16}	JFIF	
	02_{16}	TIFF	
	$0F_{16}$	JPEG	
80_{16}~$8F_{16}$	00_{16}~FF_{16}	Vendor Dependent format	
FE_{16}			Special meaning
	00_{16}	Unit Plug defined	
	01_{16}	don't care	

FIG.9

$Y_1(L_1)$	$Y_2(L_1)$	$Cb_1(L_1)$	$Cr_1(L_1)$
$Y_3(L_1)$	$Y_4(L_1)$	$Cb_3(L_1)$	$Cr_3(L_1)$
		⋮	
$Y_{N-1}(L_1)$	$Y_N(L_1)$	$Cb_{N-1}(L_1)$	$Cr_{N-1}(L_1)$
$Y_1(L_2)$	$Y_2(L_2)$	$Cb_1(L_2)$	$Cr_1(L_2)$
		⋮	
$Y_{N-1}(L_M)$	$Y_N(L_M)$	$Cb_{N-1}(L_M)$	$Cr_{N-1}(L_M)$

FIG.10

$Y_1(L_1)$	$Y_2(L_1)$	$Y_1(L_2)$	$Y_2(L_2)$
$Cb_1(L_1)$	$Cr_1(L_1)$	$Y_3(L_1)$	$Y_4(L_1)$
$Y_3(L_2)$	$Y_4(L_2)$	$Cb_3(L_1)$	$Cr_3(L_1)$
		⋮	
$Y_{N-3}(L_{M-1})$	$Y_{N-2}(L_{M-1})$	$Y_{N-3}(L_M)$	$Y_{N-2}(L_M)$
$Cb_{N-3}(L_{M-1})$	$Cr_{N-3}(L_{M-1})$	$Y_{N-1}(L_{M-1})$	$Y_N(L_{M-1})$
$Y_{N-1}(L_M)$	$Y_N(L_M)$	$Cb_{N-1}(L_{M-1})$	$Cr_{N-1}(L_{M-1})$

FIG.11

$Y_1(L_1)$	$Y_2(L_1)$	$Y_3(L_1)$	$Y_4(L_1)$
		⋮	
$Y_{N-3}(L_1)$	$Y_{N-2}(L_1)$	$Y_{N-1}(L_1)$	$Y_N(L_1)$
$Cb_1(L_1)$	$Cr_1(L_1)$	$Cb_3(L_2)$	$Cr_3(L_1)$
		⋮	
$Cb_{N-3}(L_1)$	$Cr_{N-3}(L_1)$	$Cb_{N-1}(L_1)$	$Cr_{N-1}(L_1)$
$Y_1(L_2)$	$Y_2(L_2)$	$Y_3(L_1)$	$Y_4(L_1)$
		⋮	
$Cb_{N-3}(L_M)$	$Cr_{N-3}(L_M)$	$Cb_{N-1}(L_M)$	$Cr_{N-1}(L_M)$

FIG.12

$Y_1(L_1)$	$Y_2(L_1)$	$Y_3(L_1)$	$Y_4(L_1)$
		⋮	
$Y_{N-3}(L_1)$	$Y_{N-2}(L_1)$	$Y_{N-1}(L_1)$	$Y_N(L_1)$
$Y_1(L_2)$	$Y_2(L_2)$	$Y_3(L_2)$	$Y_4(L_2)$
		⋮	
$Y_{N-3}(L_2)$	$Y_{N-2}(L_2)$	$Y_{N-1}(L_2)$	$Y_N(L_2)$
$Cb_1(L_1)$	$Cr_1(L_1)$	$Cb_3(L_1)$	$Cr_3(L_1)$
		⋮	
$Cb_{N-3}(L_1)$	$Cr_{N-3}(L_1)$	$Cb_{N-1}(L_1)$	$Cr_{N-1}(L_1)$
$Y_1(L_3)$	$Y_2(L_3)$	$Y_3(L_3)$	$Y_4(L_3)$
		⋮	
$Cb_{N-3}(L_{M-1})$	$Cr_{N-3}(L_{M-1})$	$Cb_{N-1}(L_{M-1})$	$Cr_{N-1}(L_{M-1})$

FIG.13

Address Offset	1st byte	2nd byte	3rd byte	4th byte
$00\ 00\ 00\ 00_{16}$	Y1(L1)	Y2(L1)	Cb1(L1)	Cr1(L1)
$00\ 00\ 00\ 04_{16}$	Y3(L1)	Y4(L1)	Cb3(L1)	Cr3(L1)
⋮	⋮			
$00\ 00\ 05\ 9C_{16}$	Y719(L1)	Y720(L1)	Cb719(L1)	Cr719(L1)
$00\ 00\ 05\ A0_{16}$	Y1(L2)	Y2(L2)	Cb1(L2)	Cr1(L2)
⋮	⋮			
$00\ 0A\ 8B\ FC_{16}$	Y719(L480)	Y720(L480)	Cb719(L480)	Cr719(L480)

FIG.14

Address Offset	1st byte	2nd byte	3rd byte	4th byte
$00\ 00\ 00\ 00_{16}$	Y1(L1)	Y2(L1)	Y1(L2)	Y2(L2)
$00\ 00\ 00\ 04_{16}$	Cr1(L1)	Cr1(L1)	Y3(L1)	Y4(L1)
$00\ 00\ 00\ 08_{16}$	Y3(L2)	Y4(L2)	Cb3(L1)	Cr3(L1)
⋮	⋮		⋮	
$00\ 07\ E8\ F8_{16}$	Cb717(L479)	Cr717(L479)	Y719(L479)	Y720(L479)
$00\ 07\ E8\ FC_{16}$	Y719(L480)	Y720(L480)	Cb719(L479)	Cr719(L479)

FIG.15

Address Offset	1st byte	2nd byte	3rd byte	4th byte
$00\ 00\ 00\ 00_{16}$	Y1(L1)	Y2(L1)	Y3(L1)	Y4(L1)
⋮	⋮		⋮	
$00\ 00\ 02\ CF_{16}$	Y717(L1)	Y718(L1)	Y719(L1)	Y720(L1)
$00\ 00\ 02\ D0_{16}$	Cb1(L1)	Cr1(L1)	Cb3(L1)	Cr3(L1)
⋮	⋮		⋮	
$00\ 00\ 05\ 9F_{16}$	Cb717(L1)	Cr717(L1)	Cb719(L1)	Cr719(L1)
$00\ 00\ 05\ A0_{16}$	Y1(L2)	Y2(L2)	Y3(L2)	Y4(L2)
⋮	⋮		⋮	
$00\ 0A\ 8B\ FC_{16}$	Cb717(L480)	Cr717(L480)	Cb719(L480)	Cr719(L480)

FIG.16

Address Offset	1st byte	2nd byte	3rd byte	4th byte
$00\ 00\ 00\ 00_{16}$	Y1(L1)	Y2(L1)	Y3(L1)	Y4(L1)
⋮	⋮		⋮	
$00\ 00\ 02\ CF_{16}$	Y717(L1)	Y718(L1)	Y719(L1)	Y720(L1)
$00\ 00\ 02\ D0_{16}$	Y1(L2)	Y2(L2)	Y3(L2)	Y4(L2)
⋮	⋮		⋮	
$00\ 00\ 05\ 9F_{16}$	Y717(L2)	Y718(L2)	Y719(L2)	Y720(L2)
$00\ 00\ 05\ A0_{16}$	Cb1(L1)	Cr1(L1)	Cb3(L1)	Cr3(L1)
⋮	⋮		⋮	
$00\ 00\ 08\ 6F_{16}$	Cb717(L1)	Cr717(L1)	Cb719(L1)	Cr719(L1)
$00\ 00\ 08\ 70_{16}$	Y1(L3)	Y2(L3)	Y3(L3)	Y4(L3)
⋮	⋮		⋮	
$00\ 07\ E8\ FC_{16}$	Cb717(L479)	Cr717(L479)	Cb719(L479)	Cr719(L479)

FIG.17

	msb						lsb
opcode	PRINTER STATUS2(53_{16})						
operand[0]	reserved						
operand[1]	status						
operand[2]							
operand[3]	reserved						
operand[4]							
operand[5]	Current_print_Job_ID						
⋮							
operand[16]							
operand[17]	warning						
operand[18]	reserved						
operand[19]							
operand[20]							

FIG.18

address offset	msb							lsb
00_{16}	colorant_ Empty	Cover_ open	Jummed	Head_ error	Small_ paper	No_cartridge	occupied	testing
01_{16}	Warmup	Reserved						

FIG.19

value	Symbol	Meaning
80_{16}	colorant_Empty	COLOR MATERIAL(Dye/Ink/Ribon/Toner)empty. 0=No error,1=Empty
40_{16}	Cover_open	COVER OPENED 0=No error,1=Open
20_{16}	jummed	PAPER STUFFING 0=No error,1=Jummed
10_{16}	Head_error	HEAD NOT OPERABLE 0=No error,1=Error
08_{16}	Small_paper	SMALL PAPER SIZE 0=No error,1=Small
04_{16}	No_cartridge	NO CARTRIDGE 0=No error,1=No cartridge
02_{16}	occupied	FROM OTHER I/F 0=Not occupied,1=Occupied
01_{16}	testing	TESTING ON 0=Not testing,1=In testing
80_{16}	Warmup	NOT READY

FIG.20

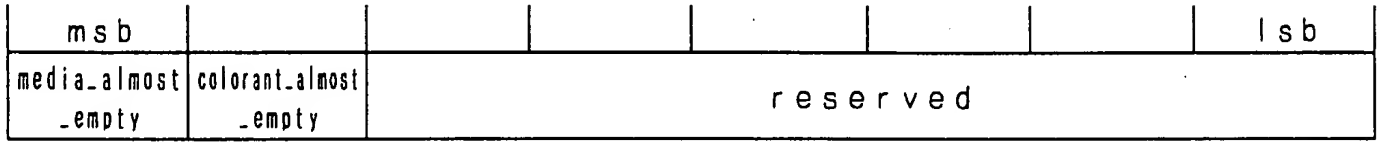

FIG.21

value	Symbol	Meaning
80_{16}	media_almost_empty	PAPER almost empty. 0=No error,1=Empty
80_{16}	colorant_almost_empty	COLOR MATERIAL (Dye/Ink/Ribon/Toner)almostempty. 0=No error,1=Empty

FIG.22

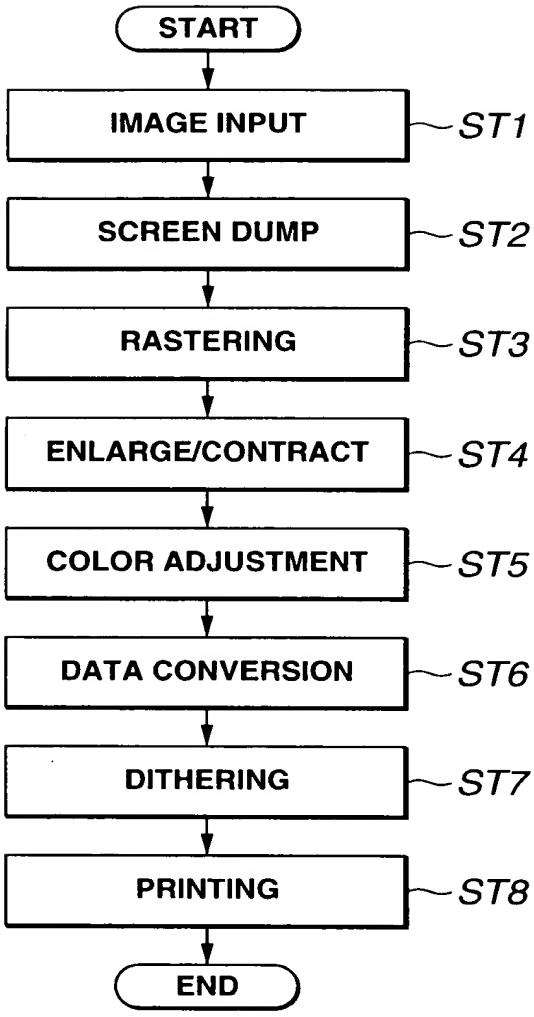
START
IMAGE INPUT
ST1
SCREEN DUMP
ST2
RASTERING
ST3
ENLARGE/CONTRACT
ST4
COLOR ADJUSTMENT
ST5
DATA CONVERSION
ST6
DITHERING
ST7
PRINTING
ST8
END

FIG.23

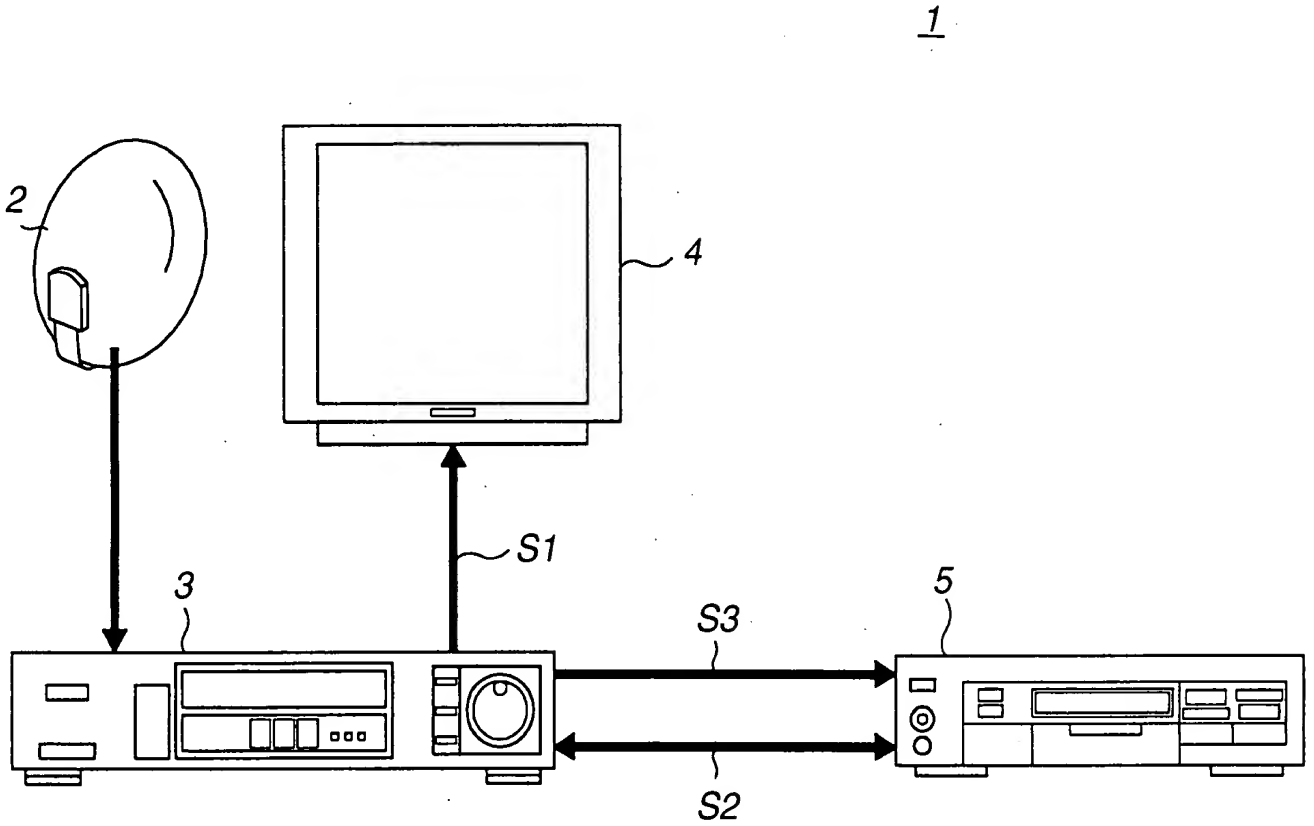

FIG.24

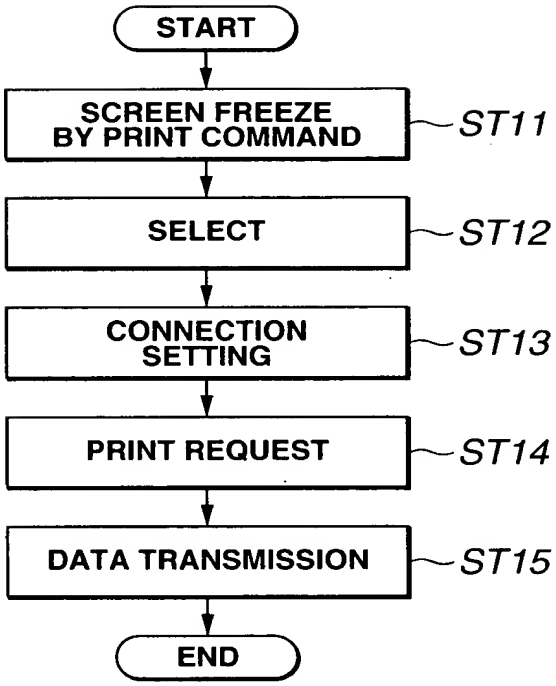
START
SCREEN FREEZE BY PRINT COMMAND
ST11
SELECT
ST12
CONNECTION SETTING
ST13
PRINT REQUEST
ST14
DATA TRANSMISSION
ST15
END

FIG.25

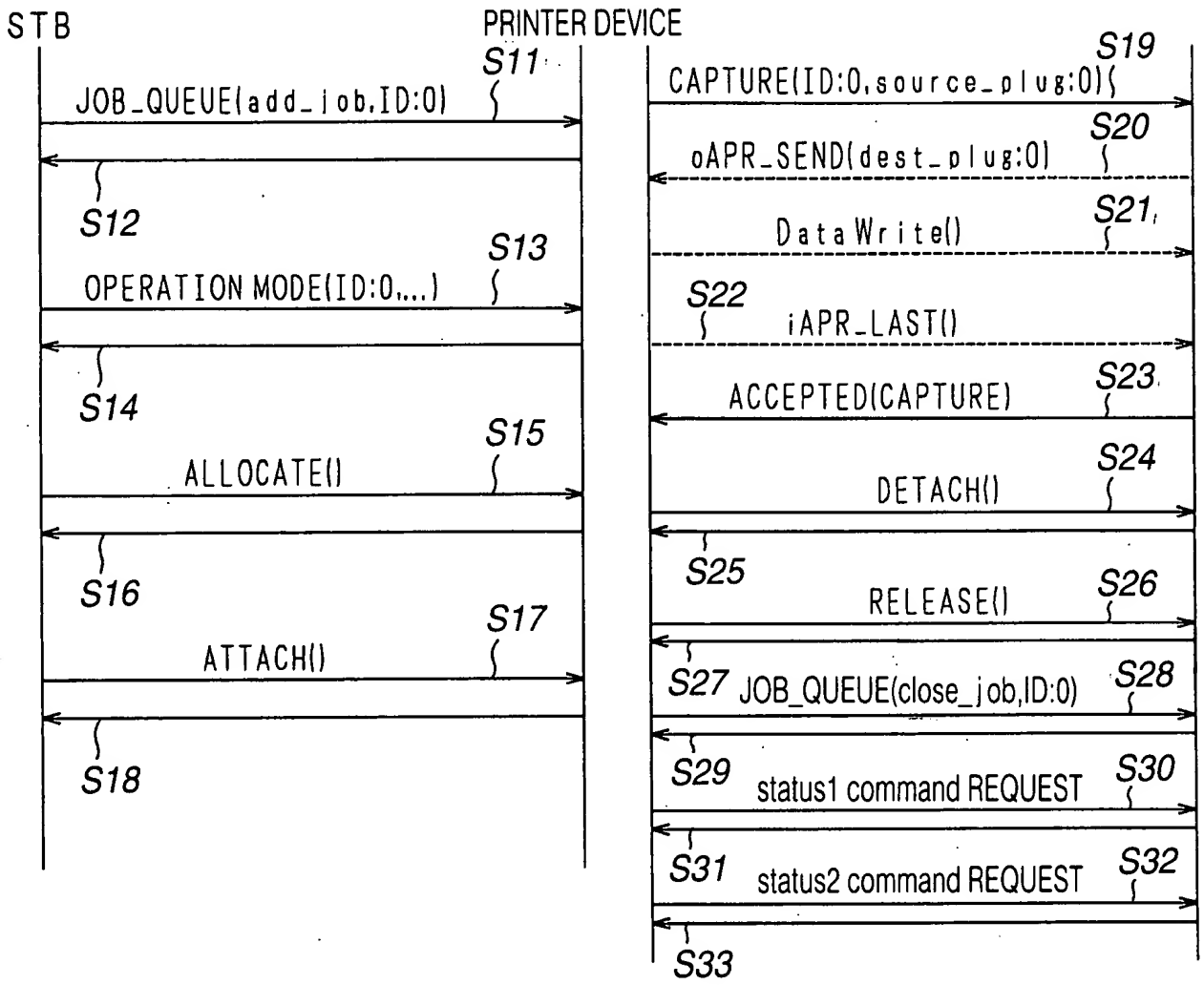
STB
PRINTER DEVICE
S11
JOB_QUEUE(add_job,ID:0)
S12
S13
OPERATION MODE(ID:0,....)
S14
S15
ALLOCATE()
S16
S17
ATTACH()
S18
S19
CAPTURE(ID:0,source_plug:0)
S20
oAPR_SEND(dest_plug:0)
S21
DataWrite()
S22
iAPR_LAST()
S23
ACCEPTED(CAPTURE)
S24
DETACH()
S25
S26
RELEASE()
S27
JOB_QUEUE(close_job,ID:0)
S28
S29
status1 command REQUEST
S30
S31
status2 command REQUEST
S32
S33

FIG.26

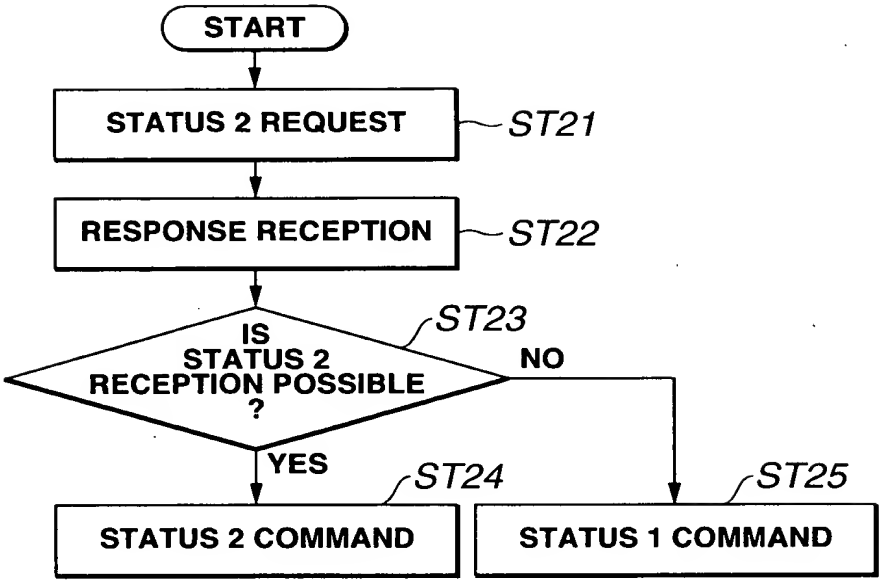
START
STATUS 2 REQUEST
ST21
RESPONSE RECEPTION
ST22
ST23
IS STATUS 2 RECEPTION POSSIBLE ?
NO
YES
ST24
ST25
STATUS 2 COMMAND
STATUS 1 COMMAND

FIG.27

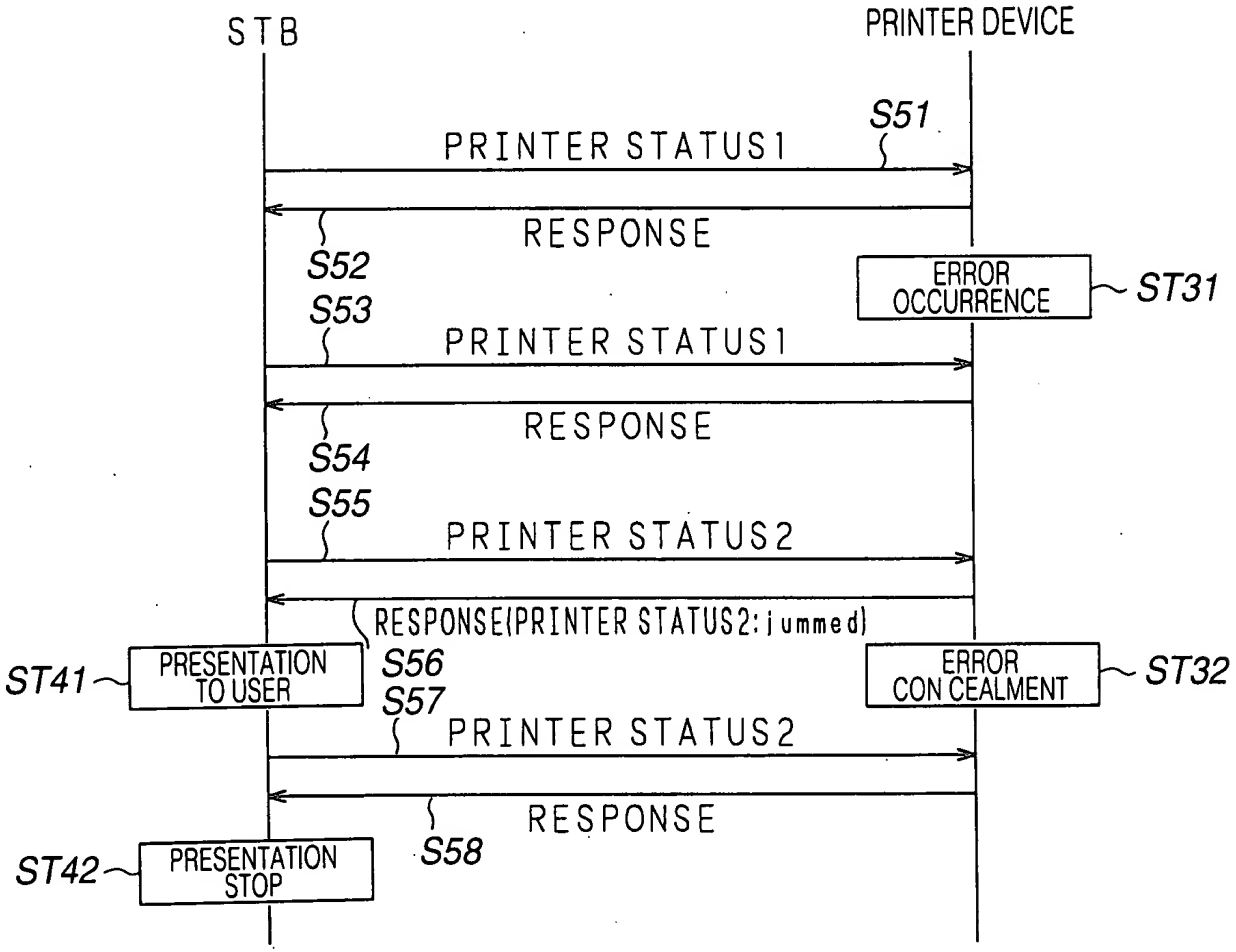
STB
PRINTER DEVICE
S51
PRINTER STATUS1
RESPONSE
S52
S53
ERROR OCCURRENCE
ST31
PRINTER STATUS1
RESPONSE
S54
S55
PRINTER STATUS2
RESPONSE(PRINTER STATUS2:jummed)
ST41
PRESENTATION TO USER
S56
S57
ERROR CON CEALMENT
ST32
PRINTER STATUS2
RESPONSE
S58
ST42
PRESENTATION STOP

FIG.28